

Can mood stabilizers reduce chronic pain in patients with bipolar disorder?

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Disclosures

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Misuse of prescription opioids has led to a staggering number of patients developing addiction, which the National Institutes of Health (NIH) and Department of Health and Human Services (HHS) have identified as a health care crisis. In the United States, approximately 29% of patients prescribed an opioid misuse it, and approximately 80% of heroin users started with prescription opioids.^{1,2} The NIH and HHS have outlined 5 priorities to help resolve this crisis:

1. Improve access to prevention, treatment, and recovery support services
2. Increase availability and distribution of overdose-reversing medications
3. As the epidemic changes, strengthen what we know with improved public health surveillance
4. Support research that advances the understanding of pain and addiction and that develops new treatments and interventions
5. Improve pain management by utilizing evidence-based practices and reducing opioid misuse and opiate-related harm.³

Treating chronic pain in patients with bipolar disorder

At the Missouri University Psychiatric Center, an inpatient psychiatric ward, we recently conducted a retrospective cohort study to identify effective alternatives for treating pain, and to decrease opioid-related harm. Our study focused on 73 inpatients experiencing exacerbation of bipolar I disorder who also had chronic pain. These patients were treated with mood stabilizers, including lithium and carbamazepine. Patients also were taking medications,

as needed, for agitation and their home medications for various medical problems. Selection of mood stabilizer therapy was non-random by standard of care based on best clinical practices. Dosing was based on blood-level monitoring adjusted to maintain therapeutic levels while receiving inpatient care. The average duration of inpatient treatment was approximately 1 to 5 weeks.

Pain was measured at baseline and compared with daily pain scores after mood stabilizer therapy using a 10-point scale, with 0 for no pain to 10 for worse pain, for the duration of the admission. As expected based on the findings of previous research, carbamazepine resulted in a decrease in average daily pain score by 1.25 points after treatment ($P = .048$; F value = 4.3; F -crit = 4.23; calculated by one-way analysis of variance). However, patients who received lithium experienced a greater decrease in average daily pain score, by 2.17 points after treatment ($P = .00035$; F value = 14.56; F -crit = 4.02).

To further characterize the relationship between bipolar disorder and chronic pain, we looked at change in pain scores for mixed, manic, and depressive episodes of bipolar disorder by Clinical Global



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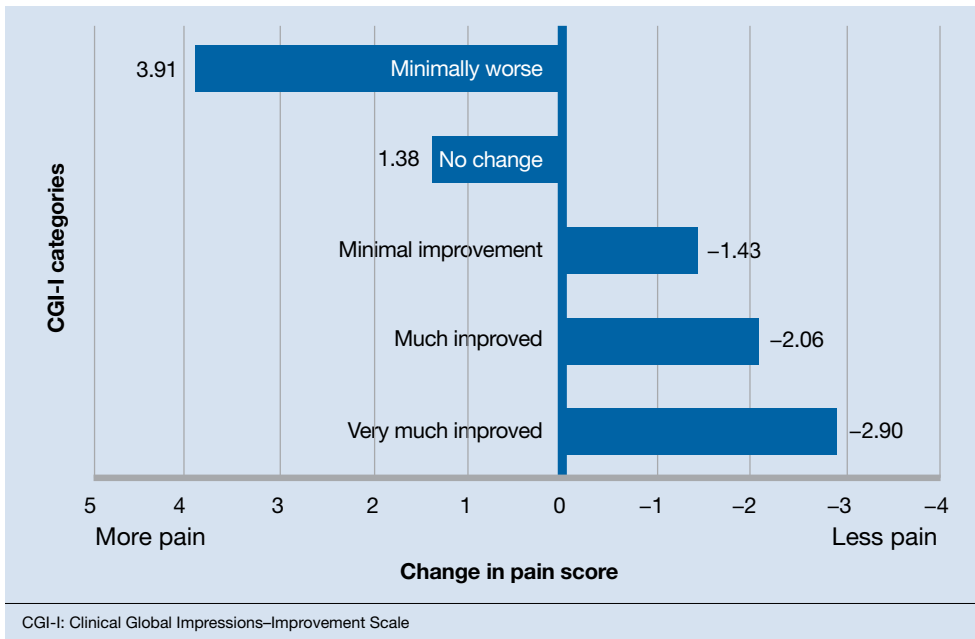
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Figure

Distribution of CGI-I categories of study participants and changes in pain scores



Lithium and carbamazepine provide significant analgesia in patients with bipolar disorder and chronic pain

Impressions—Improvement (CGI-I) Scale categories (*Figure*). Participants who experienced the greatest clinical improvement also experienced the highest degree of analgesia. Those in the “Very much improved” CGI-I category experienced an almost 3-point decrease in average daily pain scores, with significance well below threshold ($P = .0000967$; F value = 19.83; F -crit = 4.11). Participants who showed no change in their bipolar I disorder symptoms or experienced exacerbation of their symptoms showed a significant increase in pain scores ($P = .037$; F value = 6.24; F -crit = 5.32).

Our data show that lithium and carbamazepine provide clinically and statistically significant analgesia in patients with bipolar I disorder and chronic pain. Furthermore, exacerbation of bipolar I disorder symptoms was associated with an

increase of approximately 4 points on a 10-point chronic pain scale. While lithium and carbamazepine already are frequently used to treat patients with bipolar disorder, these medications may be particularly helpful for those with comorbid chronic pain.

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